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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,615	08/26/2003	Kouichi Hashimoto	03115.030001	4383

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EXAMINER

LOPEZ, MICHELLE

ART UNIT PAPER NUMBER

3721

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/648,615	Applicant(s) HASHIMOTO ET AL.	
	Examiner Michelle Lopez	Art Unit 3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-13, 17-18 is/are rejected.
- 7) ☒ Claim(s) 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is in response to the amendment filed on January 24, 2005.
2. Claim 1 has been canceled.
3. The indicated allowability of claims 7-10 is withdrawn in view of the reference to Grossmann (4,506,743).

Rejections based on the newly cited reference(s) follow.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "said percussive member", "the rotational speed ratio", "said connector shaft", and "the rotational force".

Also, claim 8 recites the limitation "the center of rotation".

There is insufficient antecedent basis for these limitations in the claims.

In claim 10, it is not clear what is meant by "equilibrium positions"?

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 6-13, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grossmann (4,506,743) in view of JP 2595262.

Grossmann discloses a hammer drill for applying rotational forces and percussive forces to a drill bit comprising a motor; a percussive force converter mechanism driven rotationally by said motor for modifying percussive forces of a percussive member (not shown numerically, but described at col. 1; 19-41) by changing the rotational speed ratio of said motor and a connector shaft 11; the connector shaft 11 is driven rotationally by said percussive force converter mechanism; said percussive force converter mechanism comprises a plurality of gears 8,9 with mutually differing numbers of gear teeth, wherein the plurality of gears can move freely in an axial direction of said connector shaft 11, and wherein a shifting switch 3 selects a gear from the plurality of gears and the selected gear is meshes by a force of a spring 18 to gear teeth equipped on said connector shaft-side.

With respect to claims 2 and 11, as Grossmann teaches a percussive force converter mechanism as a changeover mechanism arrangement for changing the rotational speed of the motor and the connector shaft 11, and a hammer drill mode having percussive forces as described in col. 1; 19-41, a percussive member is inherently disclosed as being old and known

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in the art that a hammer drill has a drill bit held in a spindle for being rotated having axial blows or impacts exerted by a percussive member upon the drill bit.

Also, with respect to claims 2 and 11, Grossmann does not disclose a motion converter mechanism for converting a rotational force of said connector shaft to a reciprocating force in an axial direction of a spindle that hold a drill bit.

However, JP 2595262 teaches a motion converter mechanism 50 for converting a rotational force of a connector shaft 23 to a reciprocating force in an axial direction of a spindle for the purpose of providing a hammer drill mechanism wherein a drill bit held in position on the spindle is rotated having axial blows or impacts exerted upon it. In view of JP2595262, it would have been obvious to one having ordinary skills in the art to have provided Grossmann's invention with a motion converter mechanism for converting a rotational force of a connector shaft to a reciprocating force in an axial direction of a spindle as shown in order to provide a hammer drill mechanism wherein a drill bit held in position on the spindle is rotated having axial blows or impacts exerted upon it.

With respect to claims 6 and 17, Grossmann does not disclose a sleeve 64 affixed to said connector shaft, wherein said sleeve is equipped with a spring disposed around the connector shaft.

However, JP 2595262 shows a sleeve 64 affixed to a connector shaft 23 and equipped with a spring 65 disposed around the connector shaft 23 for the purpose of biasing a plurality of gears 62,63.

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With respect to claim 7, Grossmann discloses wherein the percussive force converter mechanism is provided with a shifting shaft 6 between a pair of gears 8,9, wherein said shifting shaft is moved in the axial direction.

With respect to claim 8, Grossmann does not specifically disclose that the shifting shaft is disposed off-center relative to the center of rotation of a shifting switch 3.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided Grossmann's shifting shaft 6 disposed off-center relative to the center of rotation of the shifting switch 3, since it has been held that rearranging parts of an invention involves only routine skill in the art.

With respect to claims 9 and 10, Grossmann discloses wherein said pair of gears 8,9 is equipped with a specific gap in the axial direction of the connector shaft 11, and a space formed for obtaining a neutral state in which none of the pair of gears meshes with the gear teeth on said connector shaft, wherein the spring 18 is deemed to be in a neutral state by the use of a latching arrangement as shown in col. 4; 63-68 and col. 5; 59-65.

With respect to claim 11, Grossmann discloses a motor; a transmission mechanism configured to change a rotational speed between the motor and a connector shaft 11 as shown in col. 4; 14-16; a plurality of gears 8,9 of different diameters which can move in the axial direction along said connector shaft 11; gear teeth provided around said connector shaft via 8',9', wherein one of said plurality of gears meshes with said gear teeth of said connector shaft by a force of a spring 18.

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With respect to claim 12, Grossmann discloses a pinion, having a plurality of gear portions 8',9' in different diameters, wherein the plurality of gears 8,9 mesh respectively with the plurality of gears portions of said pinion.

With respect to claim 13, it is deemed that each of the gears 8,9 comprises inner gear teeth at the vicinity of 8',9' respectively to be meshed with a gear teeth of said connector shaft 11.

With respect to claim 18, Grossmann discloses a shifting switch 3 operatively connected to said connector shaft, wherein one of said plurality of gears meshes with said connector shaft 11 by operation of said shifting switch 3.

#### ***Allowable Subject Matter***

6. Claim 3-5 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

7. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

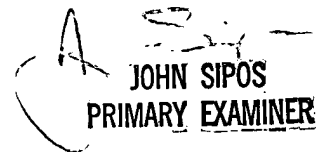
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Lopez whose telephone number is 571-272-4464. The examiner can normally be reached on Monday - Thursday: 8:00 am - 6:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML

  
JOHN SIPOS  
PRIMARY EXAMINER